**Research and development by India companies**

3263. SHRI VISHWASRAO RAMRAO PATIL: Will the PRIME MINISTER be pleased to state:

(a) whether any Indian companies have tried to develop their own research and development skill and adopt imported technologies to suit Indian conditions;

(b) if so, the details thereof; and

(c) if not, whether Government propose to make it obligatory for the Indian companies to do so?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY, DEPARTMENT OF ELECTRONICS AND DEPARTMENT OF OCEAN DEVELOPMENT AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI P. R. KUMARMANGALAM): (a) to (c) Over 1200 Indian Companies have set up their own In-house R&D Units. Out of these, there are about 350 in Chemical and Allied Industries, about 250 in Electrical and Electronics Industries, 225 in Mechanical Industries, 300 in processing industries and about 75 in Agro Industries. The objectives of these In-house R&D units are primarily to provide technical and technological support to the manufacturing units and also to develop skills and adopt imported technologies to suit the Indian conditions. The In-house R&D units have employed over 65000 R&D personnel and have created infrastructural facilities, such as, sophisticated instruments, pilot plants, proto-type design and development facilities for R&D. The R&D expenditure incurred by the In-house R&D units is estimated to be nearly Rs. 825 Crores during 1991-92.

**Exploration of Ocean near Dwaraka**

3264. SHRI SUSHIL KUMAR SAMBHAJIRAO SHINDE: Will the PRIME MINISTER be pleased to state:

(a) whether exploration of the ocean near Dwarka, undertaken by Dr. Rao has been completed;

(b) if so, what are the findings thereof; and

(c) if not, what are the preliminary findings thereof;

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY, DEPARTMENT OF ELECTRONICS AND DEPARTMENT OF OCEAN DEVELOPMENT AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI P. R. KUMARAMANGALAM): (a) No, Sir.

(b) and (c) The underwater exploration of the Ocean near Dwarka have led to the recovery of the following:

—a jetty and inner and outer fortifications;

—Mooring stones and large 3-holed anchors datable to 1500 BC found in 12.5 metre water depth.

—A number of antiquities, such as seal inscribed jar, anchors, pottery, iron, bronzed and copper artefacts and bases of flagposts.

As per the tentative conclusions drawn, the legendary city of Dwarka is believed to have been a large fortified port-city built by reclaiming land from the sea and subsequently subergine in it. The proto-histofic settlement was nearly 4 km. in length and one of the submerged fortifications was 550 metres in perimeter. Further studies have established that the Thermoluminiscence dating of the city of Dwarka can be assigned to 1500 B.C.

**Working of Meteorological Department**

3265. SHRI S. K. T. RAMACHANDRAN:
SHRI K. R. JAYADEVAPPA:

Wil the PRIME MINISTER be pleased to state:

(a) whether Government's attention have been drawn to a newsitem publisbed in the Times of India dated 12th July, 1992 on the working of the Meteorological Department on Lodi Road, New Delhi,